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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,116	10/29/2003	Scott Parsons	42414.0200	6932

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MANCHESTER, NH 03101

EXAMINER
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AL NAZER, LEITH A

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/696,116	<b>Applicant(s)</b> PARSONS, SCOTT	
	<b>Examiner</b> Leith A. Al-Nazer	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9 and 12 is/are rejected.
- 7) ☒ Claim(s) 7,10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9 rejected under 35 U.S.C. 102(b) as being anticipated by German Patent Document DE 41 40 866 to Carnero et al.

With respect to claim 1, Carnero teaches an antenna feed assembly comprising: a dipole (114 and 115); a reflector (12); and at least one bandpass filter element between the dipole and the reflector (C23-C27, L1, and L3; pages 9 and 10 of the translation).

With respect to claim 9, Carnero teaches a planar antenna feed assembly comprising: a substantially planar substrate (figure 2); a dipole (114 and 115) and a reflector (12) provided on the substrate; a first bandpass filter element (C23-27, L1, and L3; pages 9 and 10 of the translation) provided on the substrate between the dipole and the reflector; and a second bandpass filter element (C23-27, L1, and L3; pages 9 and 10 of the translation) provided on the substrate between the dipole and the reflector.

3. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,707,681 to Grant.

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With respect to claim 1, Grant teaches an antenna feed assembly comprising: a dipole (88a, 88b, 87a, 87b, 86a, and 86b); a reflector (52); and at least one bandpass filter element (17a and 17b; column 5, lines 15-30) between the dipole and the reflector (figure 1).

With respect to claim 9, Grant teaches a planar antenna feed assembly comprising: a substantially planar substrate (figure 1); a dipole (88a, 88b, 87a, 87b, 86a, and 86b) and a reflector (52) provided on the substrate; a first bandpass filter element (17a and 17b; column 5, lines 15-30) provided on the substrate between the dipole and the reflector; and a second bandpass filter element (17a and 17b; column 5, lines 15-30) provided on the substrate between the dipole and the reflector.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application Publication No. 2003/0128169 to Desargant et al. in view of German Patent Document DE 41 40 866 to Carnero et al. or U.S. Patent No. 3,707,681 to Grant.

With respect to claim 1, Desargant teaches an antenna feed assembly comprising: a radiating element (12); a reflector (22); and at least one bandpass filter element (24) between the dipole and the reflector. Claim 1 requires that the radiating element be a dipole. Dipoles are well known in the art, as is evidenced by Carnero (114 and 115) or Grant (86a, 86b, 87a, 87b, 88a, and 88b). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize a dipole in the system of Desargant. The motivation for doing so would have been to achieve a desired operating frequency or a desired radiation pattern.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application Publication No. 2003/0142029 to Desargant et al. in view of German Patent Document DE 41 40 866 to Carnero et al. or U.S. Patent No. 3,707,681 to Grant.

With respect to claim 1, Desargant teaches an antenna feed assembly comprising: a radiating element (21); a reflector (12); and at least one bandpass filter element (20) between the dipole and the reflector. Claim 1 requires that the radiating element be a dipole. Dipoles are well known in the art, as is evidenced by Carnero (114 and 115) or Grant (86a, 86b, 87a, 87b, 88a, and 88b). Therefore, at the time of the

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invention, it would have been obvious to one having ordinary skill in the art to utilize a dipole in the system of Desargant. The motivation for doing so would have been to achieve a desired operating frequency or a desired radiation pattern.

8. Claims 2-6, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent Document DE 41 40 866 to Carnero et al. in view of European Patent Application Publication EP 1 098 367 to Low.

With respect to claim 2, Carnero teaches the dipole element being constructed on a substrate (figure 2). Claim 2 requires that the bandpass filter elements comprise conductive traces fabricated on the substrate. Such a configuration is well known in the art, as is evidenced by Low (115 in figure 3). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize conductive traces in the system of Carnero. The motivation for doing so would have been to provide a compact filter with desired frequency characteristics.

With respect to claim 3, Carnero teaches the substrate comprising a printed circuit board (figure 2).

With respect to claim 4, Low teaches the at least one bandpass filter element comprising a material selected from the group consisting of metals and semiconductors (paragraph 0030).

With respect to claim 5, Low teaches the at least one bandpass filter comprising a metal selected from the group consisting of copper, brass, aluminum, and gold (paragraph 0030).

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With respect to claim 6, Carnero teaches the at least one bandpass filter element comprising a first bandpass filter element and a second bandpass filter element (pages 9 and 10).

Claims 8 and 12 require that the at least one bandpass filter element have a bandwidth of approximately 2400 MHz to approximately 2500 MHz. Although such a range is not explicitly stated, Low details how transmission line filters can be designed and configured to obtain a desired frequency response (paragraphs 0028 and 0029). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize known design dimensions and configurations to obtain a trace bandpass filter element having a bandwidth of approximately 2400 MHz to approximately 2500 MHz.

9. Claims 2-6, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,707,681 to Grant in view of European Patent Application Publication EP 1 098 367 to Low.

With respect to claim 2, Grant teaches the dipole element being constructed on a substrate (figure 1). Claim 2 requires that the bandpass filter elements comprise conductive traces fabricated on the substrate. Such a configuration is well known in the art, as is evidenced by Low (115 in figure 3). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize conductive traces in the system of Grant. The motivation for doing so would have been to provide a compact filter with desired frequency characteristics.

With respect to claim 3, Grant teaches the substrate comprising a printed circuit board (figure 1).

With respect to claim 4, Low teaches the at least one bandpass filter element comprising a material selected from the group consisting of metals and semiconductors (paragraph 0030).

With respect to claim 5, Low teaches the at least one bandpass filter comprising a metal selected from the group consisting of copper, brass, aluminum, and gold (paragraph 0030).

With respect to claim 6, Grant teaches the at least one bandpass filter element comprising a first bandpass filter element and a second bandpass filter element (column 5, lines 15-30).

Claims 8 and 12 require that the at least one bandpass filter element have a bandwidth of approximately 2400 MHz to approximately 2500 MHz. Although such a range is not explicitly stated, Low details how transmission line filters can be designed and configured to obtain a desired frequency response (paragraphs 0028 and 0029). Therefore, at the time of the invention, it would have been obvious to one having ordinary skill in the art to utilize known design criteria and configurations to obtain a trace bandpass filter element having a bandwidth of approximately 2400 MHz to approximately 2500 MHz.



***Allowable Subject Matter***

10. Claims 7, 10, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest one or more of the limitations found in dependent claims 7 and 10. With respect to dependent claim 7, the prior art of record fails to teach or suggest the first and second bandpass filter elements being elongated rectangles parallel to an edge of the dipole. With respect to dependent claim 10, the prior art of record fails to teach or suggest

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-7 and 9 have been considered but are moot in view of the new ground(s) of rejection.

***Communication Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A. Al-Nazer whose telephone number is 571-272-1938. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LA



WILSON LEE  
PRIMARY EXAMINER